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AN ANNOTATED LIST OF THE THYSANOPTERA OF PLUMMER'S ISLAND, MARYLAND

By J. DOUGLAS HOOD

Nine miles above the city of Washington, in the Potomac River, is the home of the Washington Biologists' Field Club, a little island of 12 acres known as Winnemana or Plummer's Island. From the lodge, 75 feet above the water, it slopes precipitously on the south to the edge of the Potomac; on the north and east to a low, forested flood-plain; while toward the west it is more irregular in contour, with typical upland hardwoods, scattered pines and junipers, and isolated rocky patches overgrown with such plants as *Opuntia* and poison ivy. Charming and convenient of access, it has become a favorite collecting spot for local entomologists, and in the scientific literature of the last decade there have been recorded from these 12 woodland acres more than 100 new insects, for whose reception have been erected 13 new genera and 2 new families.

The Thysanoptera, however, received no attention until January, 1912, when, through the kindness of Mr. W. L. McAtee, the author made his first visit to the island. Since that date many hundreds of specimens have been taken, until at present 57 species are known from the island itself, in addition to several unidentified uniques not here listed. Seventeen additional species have been taken within a few miles of the island—some, indeed, within a few yards. All of the latter probably occur here while several others, at present unknown, doubtless await discovery.

This list, confessedly lacking in many forms which occur commonly in the immediate vicinity and whose ecological requirements are fully met at some place on the island, is of especial interest when compared with Dr. Hinds' total of 37 species for all North America,[1] with Moulton's 24 for the State of California,[2] and with Shull's 21 for Huron County, Michigan.[3] It is interesting to note, too, the figures given by some of the more extensive lists: Uzel[4] has 100 species from Bohemia; Reuter[5] has 67 from Finland; Bagnall,[6] 74 from the British Isles; Buffa,[7] 31 from Italy; and Moulton,[8] 118 from North America.

Using the totals given in this list in comparison with the number of Coleoptera known from the island, from North America and from the world, some interesting results are secured. The Coleoptera were selected for the reason that they are one of the best worked and most representative orders of insects, and because those of the island have been studied intensively. If they be used as the basis for calculation, and the number of species known from the island (now about 1,290), divided by the number of species of thrips (57), and the total number of species of beetles described from North America (19,000), divided by the quotient (22.6), we

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[1]Hinds, Warren Elmer: "Contribution to a Monograph of the Insects of the Order Thysanoptera inhabiting North America," Proc. U. S. Nat. Mus., Vol. XXVI, 1902, pp. 79–242, pls. I–XI.

[2]Moulton, Dudley: "A Contribution to our Knowledge of the Thysanoptera of California," Bur. Ent., U. S. Dept. Agr., Tech. Ser. 12, Pt. III, 1907, pp. i–vi, 39–68, pls. I–VI.

[3]Shull, A. Franklin: "Thysanoptera and Orthoptera," in Ruthven: "A Biological Survey of the Sand Dune Region on the South Shore of Saginaw Bay, Michigan," Publ. 4, Biol. Ser. 2, Mich. Geol. and Biol. Surv. 1911, pp. 177–231.

[4]Uzel, Heinrich: "Monographie der Ordnung Thysanoptera," 1895, pp. 1–472, pls. I–X.

[5]Reuter, O. M.: "Thysanoptera Fennica: Förteckning och Beskrifning öfver Finska Thysanoptera," Acta Soc. pro Fauna et Flora Fennica, Vol. XVII, No. 2, 1899, pp. 1–69, figs.

[6]Bagnall, Richard S.: "Notes on Some New and Rare Thysanoptera (Terebrantia), with a preliminary List of the known British Species," Journ. Econ. Biol., Vol. VI, 1911, p. 1–11.

[7]Buffa, Pietro: "Trentuna Specie di Tisanotteri Italiani," Atti. Soc. Toscana Sci. Nat., Mem., Vol XXIII, 1907, pp. 1–78, Tav. I, II.

[8]Moulton, Dudley: "Synopsis, Catalogue, and Bibliography of North American Thysanoptera, with Descriptions of New Species," Bur. Ent., U. S. Dept. Agr., Tech. Ser. 21, 1911, pp. 1–54, pls. I–VI.

get 973 species of thrips for North America. Assuming again that the same proportion exists throughout the world, and that there are 150,000 described Coleoptera, we get 6,637 as the total number of Thysanoptera which will have been described from the world when that order is as well worked as the Coleoptera are at present. Certainly not more than four-fifths of the North American nor half of the world's Coleoptera are known. At this proportion the North American Thysanoptera will, when described, total nearly 1,200, while the number of species in the world will fall only slightly short of 13,000.

If, instead of the beetles, the birds be taken as the basis for calculations, and the assumed number of North American Thysanoptera (1,200) multiplied by 25 (the proportion existing between the avifauna of the world and that of North America), the result is 30,000 species of Thysanoptera.

After taking the mean of several such estimates, the author, in 1915, in a paper read before the Biological Society of Washington, placed the number of existing forms of thrips at 25,000.[1] This is considerably less than Mr. C. B. Williams' estimate made to the author in 1914. He is of the opinion that nearly 50,000 species will ultimately be described.

Suborder TEREBRANTIA Haliday

Superfamily ÆOLOTHRIPOIDEA Hood

Family ÆOLOTHRIPIDÆ Uzel

1. *Æolothrips bicolor* Hinds.—July 13; one female, taken by sweeping. Known previously from Massachusetts, Florida, Tennessee, and Indiana, but occurs also in New York, Virginia, Maryland, Minnesota, Illinois, Kansas, and Texas (coll. Hood).

2. *Æolothrips annectans* Hood.—April 18 and May 14; two females, taken by sweeping (P. R. Myers and L. O. Jackson). Described from Maryland, Virginia and New York.

3. *Æolothrips crassus* Hood.—May 19 and 23; several females in flowers of water-leaf (*Hydrophyllum virginicum* L.)

[1]See Science, N. S., Vol. XLI, 1915, p. 877.

and wild grape. The species is probably predacious, and its occurrence on the above plants of little import. Described from Plummer's Island.

Superfamily THRIPOIDEA Hood

Family HETEROTHRIPIDÆ Bagnall

4. *Heterothrips arisæmæ* Hood.—April 19–June 8; both sexes common in flowers of Jack-in-the-pulpit (*Arisæma triphyllum* L.) and green dragon (*A. dracontium* L.). Known previously from Illinois, Florida, Tennessee, and Virginia.

5. *Heterothrips vitis* Hood.—May 19–June 6; abundant in flowers of wild grape, smilax, and poison ivy (*Rhus toxicodendron* L.). Known from Maryland, Virginia, and the District of Columbia. Plummer's Island is the type locality.

Family THRIPIDÆ Uzel

6. *Chirothrips manicatus* Haliday.—June 8; both sexes, taken by sweeping grass. A European species, recorded in North America from Massachusetts, Florida, Tennessee, Iowa, Nebraska, Oregon, and British Columbia; occurs also in New York, Pennsylvania, Maryland, Virginia, Illinois, and Kansas (coll. Hood). Often very abundant in the flowers of various grasses and cereals.

7. *Limothrips cerealium* Haliday.—June 8; two females, taken by sweeping grass. A European species, recorded in the United States from Pennsylvania, Massachusetts, Tennessee, and Florida; occurs also in Virginia, Maryland, District of Columbia, Indiana, Illinois, Texas, and Kansas (coll. Hood). Probably feeds exclusively on grasses and cereals.

8. *Frankliniella nervosa* (Uzel).—July 27–September 14; two females taken in sweepings from grass. Originally described from Bohemia; recorded in the United States from Massachusetts, Iowa, and Tennessee, but occurring also in New York, Pennsylvania, Maryland, Indiana, and Illinois (coll. Hood). It may be well to call attention to the fact that *nervosa* was found by Uzel in Bohemia, in the first spring flowers, while the American species, described one year later as *Thrips*

maidis Beach and afterwards placed in synonymy by Hinds, lives throughout the year on grasses. It would seem that we are here dealing with two distinct species, one of which will ultimately be known as *Frankliniella maidis* (Beach).

9. *Frankliniella fusca* (Hinds). *The tobacco thrips.*—May 18 and 19; two females, on basswood (*Tilia americana* L.) and mountain laurel (*Kalmia latifolia* L.). Known from Massachusetts, Virginia, District of Columbia, North Carolina, South Carolina, Georgia, Alabama, Tennessee, Texas, and Michigan; occurs also in New York, Maryland, Pennsylvania, Illinois, Missouri, South Dakota, Kansas, and Nebraska (coll. Hood). Very common on many plants, especially in the flowers; injurious to shade-grown tobacco in the South, causing "white veins."

10. *Frankliniella stylosa* Hood (=*Euthrips floridensis* Morgan).—April 6–August 18, October 12; abundant on various spring flowers, such as arrow-wood (*Viburnum acerifolium* L.), fringe-tree (*Chionanthus virginica* L.), moose-wood (*Dirca palustris* L.), mountain laurel (*Kalmia latifolia* L.), and wild yam-root (*Disoscorea villosa* L.). Described from Plummer's Island and re-described from Florida; taken also in Virginia, at Great Falls, Dyke, and Four Mile Run, and in Fairfax County directly opposite the island. Morgan's *Euthrips floridensis* is identical, two paratypes being available for comparison.

11. *Frankliniella tritici* (Fitch.) *The wheat thrips.*—March 30–November 19; common on nearly every species of plant examined. Recorded from New Hampshire, Massachusetts, New York, New Jersey, District of Columbia, Florida, Michigan, Illinois, Iowa, Texas, New Mexico, Washington, Oregon, California, and Barbados Islands; occurs also in Maryland Virginia, Kansas, and Oklahoma (coll. Hood). Probably the most abundant thrips in North America.

12. *Oxythrips divisus* Hood.—April 18; several nymphs from scrub pine (*Pinus virginiana* Mill.). Very common in April and May on pines in the vicinity of Plummer's Island. Described from Maryland and Virginia.

13. *Pseudothrips inæqualis* (Beach).—May 18–July 27; both sexes, abundantly on leaves of black willow (*Salix nigra* Marsh.), and rarely in flowers of fringe-tree (*Chionanthus virginica* L.). Recorded from Iowa, Florida, and Tennessee; occurs also in Maryland, District of Columbia, and Illinois (coll. Hood).

14. *Anaphothrips obscurus* Müller. *The grass thrips.*—June 8; four females taken in sweeping from grass. Abundant and destructive in Europe and North America, producing the familiar "silver top" on many species of grasses. Recorded in America from Maine, Massachusetts, New York, Ohio, Michigan, Illinois, Iowa, Tennessee, Nebraska, California, and Ontario; occurs also in Pennsylvania, Maryland, District of Columbia, Virginia, Indiana, and North and South Dakota (coll. Hood).

15. *Aptinothrips rufus* (Gmelin), var. *rufus* only (=var. *connaticornis* Uzel).—April 20; on grass. Abundant and injurious throughout Europe; in the United States it has been recorded from Massachusetts, Michigan, Nebraska, and California, but occurs also in Maryland, New York, and Illinois (coll. Hood).

16. *Ctenothrips bridwelli* Franklin.—March 30–April 6; females common on the under surface of the leaves of wake robin or birthroot (*Trillium sessile* L.) and May-apple (*Podophyllum peltatum* L.), ovipositing in the latter plant. Recorded from New Hampshire, Michigan, and Tennessee; occurs also in Maryland, Virginia and Illinois (coll. Hood).

17. *Scolothrips 6-maculatus* (Pergande).—May 9–18; five females, taken on red cedar (*Juniperus virginiana* L.). Recorded from Iowa, Wisconsin, Missouri, Nebraska, South Carolina, Florida, and the Hawaiian Islands; occurs also in New York, Maryland, and Illinois (coll. Hood). A predacious species which has frequently been observed to feed on mites.

18. *Sericothrips cingulatus* Hinds.—June 8; two females, taken by sweeping grass. Recorded from Massachusetts, Tennessee, and Nebraska; occurs also in Maryland and Illinois (coll. Hood).

19. *Sericothrips pulchellus* Hood.—August 16; several specimens of both sexes on leaves of *Ptelea trifoliata*. Recorded only from Illinois.

20. *Scirtothrips ruthveni* Shull.—May 19; several females from leaves of mountain laurel (*Kalmia latifolia* L.). Known previously only from Huron County, Michigan, where it was taken in the terminal leaf clusters of red-osier dogwood (*Cornus stolonifera* Michx.).

21. *Scirtothrips niveus* Hood.—May 18; both sexes, on the under surface of leaves of flowering dogwood (*Cornus florida* L.). Known only from Plummer's Island.

22. *Scirtothrips brevipennis* Hood.—May 18; eight females, on red cedar (*Juniperus virginiana* L.). Known only from Plummer's Island.

23. *Echinothrips americanus* Morgan.—July 13–September 14; both sexes common in all stages on under surface of leaves of leaf-cup (*Polymnia* sp.) and touch-me-not (*Impatiens biflora* Walt. and *I. aurea* Muhl.). Known previously from Florida, Tennessee, Missouri, and District of Columbia.

24. *Heliothrips striatus* Hood.—July 27–October 12; both sexes common on the leaves of tulip-tree (*Liriodendron tulipifera* L.). Described from Maryland and Illinois; identified as *H. fasciatus* Pergande by A. C. Morgan, and recorded[1] under that name from Clarksville, Tennessee; occurs also in Virginia and the District of Columbia.

25. *Thrips tabaci* Lindeman. *The onion thrips.*—May 19; one female, in flower of fringe-tree (*Chionanthus virginica* L.). A very injurious, cosmopolitan species, probably occurring in every State of the Union.

26. *Thrips varipes* Hood.—March 30–April 6; eleven females, taken in flowers of *Muscari racemosum* (L.) Mill. and dog-tooth violet (*Erythronium* sp.). Known only from Maryland and Illinois.

27. *Thrips impar* Hood.—August 16–September 14; both sexes abundant in flowers of touch-me-not (*Impatiens* sp.).

[1]Russell, Bull. 118, Bur. Ent., U. S. Dept. Agr., p. 15, 1912; and Morgan, Proc. U. S. Nat. Mus., Vol. 46, p. 43, 1913.

Plummer's Island is the type locality; recorded also from Illinois.

28. *Thrips winnemanæ* Hood.—May 19; two females (the types), taken in flowers of water-leaf (*Hydrophyllum virginicum* L.). Known only from Plummer's Island, Maryland.

29. *Thrips abdominalis* Crawford.—April 6–20; several females in flowers of *Senecio* and *Saxifraga*. Recorded from Mexico, Oklahoma, Florida, Georgia, and Virginia; occurs also in Maryland, Illinois, Kansas, and Texas (coll. Hood), often common in various flowers.

30. *Plesiothrips perplexus* (Beach).—July 27–September 14; three females, from axils of grass. Recorded from Iowa, Massachusetts, Florida, and Tennessee; occurs also in Maryland, Illinois, and Texas (coll. Hood).

31. *Microthrips piercei* Morgan.—September 1–14; both sexes, often abundant on the under surface of leaves of leaf-cup (*Polymnia* sp.) and rosin weed (*Silphium trifoliatum* L.). Recorded from Texas and Tennessee; occurs also in Virginia and Maryland (coll. Hood).

Family MEROTHRIPIDÆ Hood

32. *Merothrips morgani* Hood.—October 5; one female, under bark on fungus-covered branch of willow. Recorded from Illinois, Kentucky, and the District of Columbia; one female at hand from Pine Key, Florida, January, 1914, was found by Mr. R. C. Shannon in shells and débris taken by Mr. John B. Henderson.

Suborder TUBULIFERA Haliday

Superfamily PHLŒOTHRIPOIDEA Hood

Family PHLŒOTHRIPIDÆ Uzel

33. *Haplothrips statices* Haliday.—May 8; one female, probably in flight. An abundant, destructive species, described by Osborn under the name *nigra* but positively identical with the European *statices*.[1] It has been recorded in the United States

[1]Hood, Ins. Insc. Menstr., Vol. II, 1914, p. 19.

from Massachusetts, Florida, Michigan, Iowa, Oregon, California, New York, Pennsylvania, District of Columbia, Maryland, Virginia, Illinois, South Dakota, and Montana.

34. *Haplothrips verbasci* Osborn.—July 27; both sexes common on mullein (*Verbascum thapsus* L.). Recorded from Massachusetts, Florida, Tennessee, Michigan, and Iowa; occurs also in Pennsylvania, Maryland, District of Columbia, Indiana, and Illinois (coll. Hood). Feeds exclusively on mullein.

35. *Zygothrips americanus* Hood.—Throughout the year, under loose bark of every species of tree examined. Recorded from Illinois, Michigan, Missouri, Nebraska, and Maryland; taken also in the District of Columbia, and at Vienna, Virginia (R. A. Cushman).

36. *Lissothrips muscorum* Hood.—April 12; several females from moss on tree trunk. Recorded only from Illinois; specimens at hand add Michigan, District of Columbia, and Maryland, to its known distribution.

37. *Hoplothrips karnyi karnyi* Hood.—May 18 and October 12; both sexes under hickory and willow bark. Known also from Illinois and Virginia. Plummer's Island is the type locality.

38. *Trichothrips angusticeps* Hood.—February 20; two females from beneath moist bark on maple log covered with *Polyporus*. Recorded only from Illinois; occurs also in Pennsylvania, Maryland, and Virginia (coll. Hood).

39. *Trichothrips flavicauda* Morgan.—October 5; two females and one male, under bark on fungus-covered willow branch. Described from Kentucky; in addition to the above-mentioned specimens, I have one female from Bluemont, Virginia, taken August 31 from a dead branch of pawpaw (*Asimina triloba* (L.) Dunal).

40. *Trichothrips anomocerus* Hood.—January 26–March 30; often abundant under sycamore bark. Taken at Vienna, Virginia, May 3, under bark of grape, by R. A. Cushman. Described from Plummer's Island, Maryland.

41. *Rhynchothrips tridentatus* (Shull).—April 6; one male taken on leaf of *Trillium;* a common species on various oaks,

the larvæ living in irregularities of the bark. Recorded only from Michigan; occurs also in Illinois, Missouri, Maryland, and the District of Columbia (coll. Hood).

42. *Rhynchothrips pruni* Hood.—February 2; one female and one male, taken under bark of wild cherry tree (*Prunus serotina* Ehrh.). Previously known only from Illinois.

43. *Rhynchothrips salicarius* Hood.—May 9–October 12; many females, taken at the base of young willow shoots, where their feeding deformed the young leaves and retarded the growth of the trees. Taken also at Bluemont, Virginia, August 31. Previously known only from Plummer's Island.

44. *Liothrips caryæ* (Fitch).—May 18–June 29; common in *Phylloxera* galls on leaves of hickory. Until its redescription in 1914, this species had been lost to science for nearly 60 years. Known from New York, Maryland, and Illinois.

45. *Liothrips citricornis* (Hood).—April 20–August 18; common on the under surface of the leaves of hickory and grape; occasionally also on dogwood (*Cornus florida* L.) and *Viburnum*. Recorded from Pennsylvania, Illinois, Michigan, and Tennessee; occurs also in Maryland, District of Columbia, and Virginia (coll. Hood).

46. *Liothrips leucogonis* Hood.—April 28; one female (the type) taken from *Ostrya virginiana* L. Known only from Maryland.

47. *Leptothrips mali* (Fitch) (=*Cryptothrips aspersus* Hinds).—Common from early spring to late fall, living singly on the leaves of various trees. Recorded from Massachusetts, Pennsylvania, Maryland, District of Columbia, Florida, Michigan, Indiana, Illinois, Tennessee, Missouri, Texas, California, Mexico, Panama, and Barbados; occurs also in Wisconsin, New York, and Virginia (coll. Hood). Mr. R. A. Cushman, of the Bureau of Entomology, has several times observed this species preying on aphids.

48. *Hoplandrothrips xanthopus* Hood.—August 11–October 12; abundant in dead leaves of maple, oak, and willow. Previously known only from Illinois and Pennsylvania; taken also by R. A. Cushman and the writer at Vienna, Virginia.

49. *Hoplandrothrips juniperinus* Hood.—May 9–19; abundant on dead branches of red cedar (*Juniperus virginiana* L.). Known only from two trees growing on Plummer's Island.

50. *Hoplandrothrips funebris* Hood.—May 9–October 12; both sexes common under loose bark of willow, oak, and cottonwood. Known from Illinois, Missouri, Maryland, District of Columbia, and Florida; taken also by R. A. Cushman and the writer at Vienna, Virginia.

51. *Hoplandrothrips insolens* Hood.—October 12 and April 12; one male, taken among dead leaves in fork of willow tree, and one female, taken under loose sycamore bark. Previously known from one female taken on elm in Illinois.

52. *Acanthothrips magnafemoralis* Hinds.—Is common throughout the year, under and on the bark of various trees, and in dried leaves, hibernating as adult. Pupæ taken May 12 matured May 23 and 25. Recorded from Florida, Massachusetts, Illinois, and Tennessee; occurs also in New York, Maryland, District of Columbia, and Virginia (coll. Hood).

53. *Cryptothrips junctus* Hood.—October 5; three males, taken under bark on dead willow branch. Recorded only from Michigan and Illinois; taken at Beltsville, Maryland, March 2, 1913, under bark of scrub pine (*Pinus virginiana* Mill.).

Family MEGATHRIPIDÆ Karny

54. *Megalothrips spinosus* Hood.—June 8–October 12; both sexes and many nymphs from dead leaves in fork of willow tree, and from dead willow branch. Recorded from Pennsylvania and Minnesota; occurs also in New York (coll. U. S. Nat. Mus.), Massachusetts, Virginia, Maryland, and Illinois (coll. Hood), often common in hollow twigs and in galls on golden rod stems.

Family IDOLOTHRIPIDÆ Bagnall

55. *Idolothrips coniferarum* Pergande.—April 20–June 8; abundant on red cedar (*Juniperus virginiana* L.). Recorded from Massachusetts and Virginia; occurs also in New Hampshire and Maryland (coll. Hood).

56. *Idolothrips tuberculatus* Hood.—June 29; one male, from branch of red oak. Recorded only from Illinois, but

occurring also in Missouri, Maryland, District of Columbia, and Virginia (coll. Hood).

57. *Idolothrips armatus* Hood.—July 13; one female, taken by sweeping grass. Previously known only from Illinois, where it is often abundant in old galls on golden rod (*Solidago*); occurs also in Maryland and Virginia (coll. Hood).

SUPPLEMENTARY LIST

The following species have been taken in the vicinity of the island:

1. *Æolothrips vittipennis* Hood.—May 9; one male, taken on leaf of hickory, near Plummer's Island. Previously known from Illinois and the District of Columbia.

2. *Frankliniella williamsi* Hood.—November 1; both sexes in abundance between the husks of standing and freshly cut Indian corn, at Georgetown, District of Columbia. Known also from Virginia.

3. *Odontothrips pictipennis* Hood.—May 19; one female (the unique type) from flower of *Azalea nudiflora* L., at Great Falls, Virginia.

4. *Cephalothrips yuccæ* Hinds.—Both sexes abundant at all seasons on *Yucca filamentosa*, near Plummer's Island. Previously known from Massachusetts, District of Columbia, Florida, Tennessee, and Barbados.

5. *Zygothrips harti* Hood[1] (= *Z. femoralis* Morgan[2]).—June 8–29; three females taken under dead bark of sumac (*Rhus* sp.) and by sweeping grass, near Plummer's Island. Recorded from Texas, Tennessee, Illinois, Virginia, and Maryland.

6. *Hoplothrips corticis* (De Geer).—November 1; both sexes under bark on dead willow branch, Rosslyn, Virginia. Described from Europe, and recorded in North America from Massachusetts, Connecticut, New York, and Illinois.

7. *Hoplothrips beachi* (Hinds).—November 1; both sexes under bark on dead willow branch, Rosslyn, Virginia. Re-

[1]Proc. Biol. Soc. Washington, Vol. XXVI, p. 162; June 30, 1913.
[2]Proc. U. S. Nat. Mus., Vol 46, p. 40, figs. 76–79; August 23, 1913.

corded previously from Massachusetts, District of Columbia. Michigan, and Illinois.

8. *Neothrips corticis* Hood.—April 20; several specimens taken under loose scales of the bark of an apple tree at Cabin John, Maryland; four specimens under apple bark, Vienna, Virginia, November 7 (R. A. Cushman); abundant under apple bark at Bennings, District of Columbia, March 23. Recorded from Illinois and Michigan.

9. *Liothrips castaneæ* Hood.—May 19; several specimens from chestnut leaves, Great Falls, Virginia. Known also from Maryland and Connecticut.

10. *Liothrips brevicornis* Hood.—June 29; nymphs taken on leaves of sassafras, near Plummer's Island; one female from Beltsville, Maryland, May 2, 1915. Recorded only from Virginia.

11. *Hoplandrothrips microps* Hood.—September 7 and October 1; three females from dead branches of apple and willow, at Bennings, District of Columbia, and Rosslyn, Virginia. Recorded only from Illinois.

12. *Gastrothrips ruficauda* Hood.—May 23, October 1, and November 1; four females from dead willow and viburnum branches, at Rosslyn, Virginia, and Great Falls, Maryland. Recorded from Illinois and Virginia.

MISCELLANEOUS NEW AMERICAN LEPIDOPTERA

By HARRISON G. DYAR

HESPERIIDÆ

Vehilius norma, new species.

Dark brown; fore wing with fulvous shading along costa and inner margin half way out; a fulvous spot in interspaces 2–3 and 3–4 near their bases; two small subapical spots. Hind wing with fulvous shading over the disk. Beneath, fore wing with veins fulvous; the spots repeated. Hind wing with the